

Transmitter Image Suppression in TDD Transceivers

ABSTRACT OF THE DISCLOSURE

5 In a transceiver comprising a time-division-duplex (TDD) of transmit and receive functions, the characteristics of unwanted image signal energy being transmitted from the transceiver are determined, and thereafter feedback is provided to the transmitter to reduce this unwanted image signal energy. The image signal energy is measured by the receiver component of the transceiver and fed back to the transmitter component of the transceiver. The transmitter
10 component uses the fed back information to adjust the gain and or phase relationship between the quadrature signals that are subsequently quadrature-phase modulated and transmitted. A variety of techniques can be employed to allow the image signal energy to be measured directly by the receiver component. The phase modulation signals at the transmitter can be interchanged, so that the unwanted image signal energy is transmitted in the sideband of the intended signal.
15 Alternatively, the phase modulation signals at the receiver can be interchanged, so that the receiver's operating frequency is shifted from the frequency of the transmitter's intended signal sideband to the frequency of the transmitter's unwanted image signal sideband.

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